SEQUENCE LISTING

<110>   Loibner, Hans
        Himmler, Gottfried
        Waxenecker, Gunter
        Schuster, Manfred
        Putz, Thomas

<120>   Immunogenic Recombinant Antibody

<130>   4518-0111PUS1

<140>   US 10/552,324
<141>   2004-04-16

<150>   AT A 599/2003
<151>   2003-04-17

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<170>   PatentIn version 3.3

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        (Chinese Hamster Ovary) cells

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<213>  Artificial Sequence

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       (Chinese Hamster Ovary) cells

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Val His Ser Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Arg
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Pro Gly Thr Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Ala Phe
            35                  40                  45


Thr Asn Tyr Leu Ile Glu Trp Val Lys Gln Arg Pro Gly Gln Gly Leu
        50                  55                  60


Glu Trp Ile Gly Val Ile Asn Pro Gly Ser Gly Gly Thr Asn Tyr Asn
65                  70                  75                  80


Glu Lys Phe Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser
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Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser Asp Asp Ser Ala Val
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Tyr Phe Cys Ala Arg Asp Gly Pro Trp Phe Ala Tyr Trp Gly Gln Gly
            115   120   125

Thr Leu Val Thr Val Ser Ala Ala Lys Thr Thr Ala Pro Ser Val Tyr
    130   135   140

Pro Leu Ala Pro Val Cys Gly Asp Thr Thr Gly Ser Ser Val Thr Leu
145   150   155   160

Gly Cys Leu Val Lys Gly Tyr Phe Pro Glu Pro Val Thr Leu Thr Trp
            165   170   175

Asn Ser Gly Ser Leu Ser Ser Gly Val His Thr Phe Pro Ala Val Leu
            180   185   190

Gln Ser Asp Leu Tyr Thr Leu Ser Ser Ser Val Thr Val Thr Ser Ser
            195   200   205

Thr Trp Pro Ser Gln Ser Ile Thr Cys Asn Val Ala His Pro Ala Ser
    210   215   220

Ser Thr Lys Val Asp Lys Lys Ile Glu Pro Arg Gly Pro Thr Ile Lys
225   230   235   240

Pro Cys Pro Pro Cys Lys Cys Pro Ala Pro Asn Leu Leu Gly Gly Pro
            245   250   255

Ser Val Phe Ile Phe Pro Pro Lys Ile Lys Asp Val Leu Met Ile Ser
            260   265   270

Leu Ser Pro Ile Val Thr Cys Val Val Val Asp Val Ser Glu Asp Asp
            275   280   285

Pro Asp Val Gln Ile Ser Trp Phe Val Asn Asn Val Glu Val His Thr
    290   295   300

Ala Gln Thr Gln Thr His Arg Glu Asp Tyr Asn Ser Thr Leu Arg Val
305   310   315   320

Val Ser Ala Leu Pro Ile Gln His Gln Asp Trp Met Ser Gly Lys Glu
            325   330   335

Phe Lys Cys Lys Val Asn Asn Lys Asp Leu Pro Ala Pro Ile Glu Arg
            340   345   350

Thr Ile Ser Lys Pro Lys Gly Ser Val Arg Ala Pro Gln Val Tyr Val
            355   360   365

Leu Pro Pro Pro Glu Glu Glu Met Thr Lys Lys Gln Val Thr Leu Thr
    370   375   380

Cys Met Val Thr Asp Phe Met Pro Glu Asp Ile Tyr Val Glu Trp Thr
385   390   395   400

Asn Asn Gly Lys Thr Glu Leu Asn Tyr Lys Asn Thr Glu Pro Val Leu
            405   410   415

Asp Ser Asp Gly Ser Tyr Phe Met Tyr Ser Lys Leu Arg Val Glu Lys
            420   425   430

Lys Asn Trp Val Glu Arg Asn Ser Tyr Ser Cys Ser Val Val His Glu
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Lys
465

<210> 3
<211> 243
<212> PRT
<213> Artificial Sequence

<220>
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(Chinese Hamster Ovary) cells

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Phe Ile Ser Ile Leu Leu Trp Leu Tyr Gly Ala Asp Gly Asn Ile Val
            20   25   30

Met Thr Gln Ser Pro Lys Ser Met Ser Met Ser Val Gly Glu Arg Val
        35   40   45

Thr Leu Thr Cys Lys Ala Ser Glu Asn Val Val Thr Tyr Val Ser Trp
    50   55   60

Tyr Gln Gln Lys Pro Glu Gln Ser Pro Lys Leu Leu Ile Tyr Gly Ala
65   70   75   80

Ser Asn Arg Tyr Thr Gly Val Pro Asp Arg Phe Thr Gly Ser Gly Ser
            85   90   95

Ala Thr Asp Phe Thr Leu Thr Ile Ser Ser Val Gln Ala Glu Asp Leu
        100   105   110

Ala Asp Tyr His Cys Gly Gln Gly Tyr Ser Tyr Pro Tyr Thr Phe Gly
        115   120   125

Gly Gly Thr Lys Leu Glu Ile Lys Arg Ala Asp Ala Ala Pro Thr Val
    130   135   140

Ser Ile Phe Pro Pro Ser Ser Glu Gln Leu Thr Ser Gly Gly Ala Ser
145   150   155   160

Val Val Cys Phe Leu Asn Asn Phe Tyr Pro Lys Asp Ile Asn Val Lys
                165   170   175

Trp Lys Ile Asp Gly Ser Glu Arg Gln Asn Gly Val Leu Asn Ser Trp
                180   185   190

Thr Asp Gln Asp Ser Lys Asp Ser Thr Tyr Ser Met Ser Ser Thr Leu
            195   200   205

Thr Leu Thr Lys Asp Glu Tyr Glu Arg His Asn Ser Tyr Thr Cys Glu
    210   215   220

Ala Thr His Lys Thr Ser Thr Ser Pro Ile Val Lys Ser Phe Asn Arg
225   230   235   240

Asn Glu Cys

<210>   4
<211>   243
<212>   PRT
<213>   Artificial Sequence

<220>
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         (Chinese Hamster Ovary) cells

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Phe Ile Ser Ile Leu Leu Trp Leu Tyr Gly Ala Asp Gly Asn Ile Val
                20   25   30

Met Thr Gln Ser Pro Lys Ser Met Ser Met Ser Val Gly Glu Arg Val
            35   40   45

Thr Leu Thr Cys Lys Ala Ser Glu Asn Val Val Thr Tyr Val Ser Trp
    50   55   60

Tyr Gln Gln Lys Pro Glu Gln Ser Pro Lys Leu Leu Ile Tyr Gly Ala
65   70   75   80

Ser Asn Arg Tyr Thr Gly Val Pro Asp Arg Phe Thr Gly Ser Gly Ser
                85   90   95

Ala Thr Asp Phe Thr Leu Thr Ile Ser Ser Val Gln Ala Glu Asp Leu

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           100                      105                     110

Ala Asp Tyr His Cys Gly Gln Gly Tyr Ser Tyr Pro Tyr Thr Phe Gly
        115             120             125

Gly Gly Thr Lys Leu Glu Ile Arg Arg Ala Asp Ala Ala Pro Thr Val
        130             135             140

Ser Ile Phe Pro Pro Ser Ser Glu Gln Leu Thr Ser Gly Gly Ala Ser
145             150             155             160

Val Val Cys Phe Leu Asn Asn Phe Tyr Pro Lys Asp Ile Asn Val Lys
            165             170             175

Trp Lys Ile Asp Gly Ser Glu Arg Gln Asn Gly Val Leu Asn Ser Trp
            180             185             190

Thr Asp Gln Asp Ser Lys Asp Ser Thr Tyr Ser Met Ser Ser Thr Leu
        195             200             205

Thr Leu Thr Lys Asp Glu Tyr Glu Arg His Asn Ser Tyr Thr Cys Glu
    210             215             220

Ala Thr His Lys Thr Ser Thr Ser Pro Ile Val Lys Ser Phe Asn Arg
225             230             235             240

Asn Glu Cys                    •
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<211> 243
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Phe Ile Ser Ile Leu Leu Trp Leu Tyr Gly Ala Asp Gly Asn Ile Val
            20              25              30

Met Thr Gln Ser Pro Arg Ser Met Ser Met Ser Val Gly Glu Arg Val
        35              40              45

Thr Leu Thr Cys Arg Ala Ser Glu Asn Val Val Thr Tyr Val Ser Trp
    50              55              60

Tyr Gln Gln Arg Pro Glu Gln Ser Pro Arg Leu Leu Ile Tyr Gly Ala
65              70              75              80
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Ser Asn Arg Tyr Thr Gly Val Pro Asp Arg Phe Thr Gly Ser Gly Ser
                85   90   95

Ala Thr Asp Phe Thr Leu Thr Ile Ser Ser Val Gln Ala Glu Asp Leu
            100   105   110

Ala Asp Tyr His Cys Gly Gln Gly Tyr Ser Tyr Pro Tyr Thr Phe Gly
        115   120   125

Gly Gly Thr Arg Leu Glu Ile Arg Arg Ala Asp Ala Ala Pro Thr Val
    130   135   140

Ser Ile Phe Pro Pro Ser Ser Glu Gln Leu Thr Ser Gly Gly Ala Ser
145   150   155   160

Val Val Cys Phe Leu Asn Asn Phe Tyr Pro Lys Asp Ile Asn Val Lys
            165   170   175

Trp Lys Ile Asp Gly Ser Glu Arg Gln Asn Gly Val Leu Asn Ser Trp
            180   185   190

Thr Asp Gln Asp Ser Lys Asp Ser Thr Tyr Ser Met Ser Ser Thr Leu
        195   200   205

Thr Leu Thr Lys Asp Glu Tyr Glu Arg His Asn Ser Tyr Thr Cys Glu
    210   215   220

Ala Thr His Lys Thr Ser Thr Ser Pro Ile Val Lys Ser Phe Asn Arg
225   230   235   240

Asn Glu Cys